STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

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May 8, 2019

Via Electronic Mail to arfarless@tva.gov
Attn: Ashley Farless, NEPA Compliance Specialist
Tennessee Valley Authority
1101 Market Street, BR4A-C
Chattanooga, TN 37402

Dear Ms. Farless:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) *Draft Environmental Assessment* (EA) which proposes to construct a new wet flue gas desulfurization (WFGD) wastewater treatment facility (WWT) at Cumberland Fossil Plant (CUF) located in Cumberland City, Stewart County, Tennessee, approximately 22 miles southwest of Clarksville. TVA proposes to construct the WFGD WWT to meet regulatory limits established by the Environmental Protection Agency's (EPA) Effluent Limitation Guidelines (ELG) for Steam-Electric Generating Facilities. In the fall of 2015, the EPA issued revised ELGs for Steam-Electric Generating Facilities. These guidelines included new, stringent discharge limits for mercury, arsenic, selenium, and nitrates/nitrites in WFGD wastewater in addition to the previous limits for total suspended solids and oil and grease. The 2015 ELGs are currently the subject of litigation and are under further review by the EPA; thus, there is uncertainty about the final revised limitations.[1]

Actions considered in detail within the Draft EA include:

- **Alternative 1 – No Action Alternative**. If a wastewater treatment system is not developed and constructed at CUF, wastewater from the scrubber system would discharge into on-site Process Water Basins (PWBs), which would then discharge through the existing NPDES outfall. According to TVA, This solution is not reasonable, because the wastewater would not be properly treated to meet requirements set forth in the ELGs and incorporated in TVA's NPDES permit; however, this alternative serves as a baseline for comparison of alternatives.

[1] On September 18, 2017, EPA published in the Federal Register, a postponement rule that delayed the applicability deadline of the ELGs for certain wastewaters including WFGD discharges. While the rule is being revisited, TVA is developing strategies to comply with future requirements. The proposed wastewater treatment system is being completed in stages at CUF to allow TVA to comply with the revised WFGD ELGs when they are released as final.

- **Alternative 2 – Construct Wastewater Treatment System, Stages A & B**.[2] Under Alternative 2, TVA would construct a new WFGD wastewater treatment system at CUF including necessary laydown areas. This alternative would maintain a once-through WFGD (scrubber) operation and implement Stages A and B as described below:

    - Stage A includes installing the equipment necessary for WFGD wastewater treatment solids removal and dewatering. This may include (single or dual stage) clarification to remove the bulk of the solids and WFGD effluent fines dewatering to prepare for placement in a landfill. Stage A elements are required regardless of possible outcomes of EPA's review of the ELG rule limits and are necessary to meet certain requirements of EPA's Coal Combustion Residuals (CCR Rule). Stage A is expected to be completed as soon as September 2020. Gypsum fines removed during this stage will go to an on-site landfill.

    - Stage B includes the physical-chemical wastewater treatment steps necessary to remove dissolved and particulate metals such as arsenic and mercury from process flows. This stage represents the expected minimum treatment requirement resulting from EPA's review of the ELGs. This stage contains flexibility to address the uncertainty about the result of EPA's review, and is expected to be implemented at CUF by September 1, 2021 to meet the mercury and arsenic limits in the ELGs. Should CUF be granted the FDF variance or other regulatory accommodation that does not require biological treatment, TVA would also attempt to optimize to the extent practical the removal of selenium from discharges using the physical-chemical treatment steps identified by EPA as best available technology in support of development of site-specific limitations.

- **Alternative 3 – Construct Wastewater Treatment System, Stages A, B & C**. Under Alternative 3, TVA would construct a new WFGD wastewater treatment system at CUF including necessary laydown areas. This alternative would maintain a once-through WFGD (scrubber) operation at CUF and would implement Stages A and B as previously described, and Stage C as detailed below:

    - Stage C involves additional treatment of WFGD effluent to meet selenium and nitrate/nitrite limits that were outlined in the 2015 ELG rule.

TDEC has reviewed the Draft EA and provides the following comments:

[2] TVA's preferred alternative is Alternative 2 – Construct Wastewater Treatment System, Stages A & B and optimize selenium removal to the extent practical to establish site-specific selenium limits. This alternative would meet the purpose and need of the project. TVA acknowledges that Alternative 2 would not likely enable TVA to meet the limits on selenium and nitrate/nitrate currently set in the NPDES permit issued for CUF, which incorporates the limits promulgated in the 2015 ELG Rule. However, as noted above, EPA is reconsidering that rule, and TVA's application for alternative limits based on fundamentally different factors is still pending. To the extent that the reconsidered rule and/or EPA's decision on TVA's fundamentally different factors application require more treatment than is contemplated under Alternative 2, TVA would reconsider its preferred alternative to enable compliance with the requirements.

Cultural and Natural Resources

TDEC believes the Draft EA adequately addresses potential impacts to cultural and natural resources within the proposed project area.

Air Resources

Emissions are anticipated from machinery and equipment. There are no emissions estimates provided or modeling analysis of the possible mobile emissions associated with the heavy equipment and trucks/work crews potentially involved with the project. There are no estimates of fugitive dust emissions likely to be generated during the project. TDEC recommends that TVA consider including estimates or discussion of machinery and fugitive dust emissions in the Final EA.

CUF is required to maintain a current Title V air permit in order to continue to operate. Fugitive dust control measures are required to be followed by Title V permitted sources. No modifications to the permit would be required if the specified measures to control fugitive dust are followed and potential fugitive dust emissions are of an insignificant nature.

Solid Waste

TDEC recommends that any wastes associated with the proposed action or its alternatives be managed in accordance with the Solid and Hazardous Waste Rules and Regulations of the State of Tennessee.[3] TDEC recommends that the Final EA reference that any wastes that are generated during the construction process or uncovered during site preparation are subject to the Solid and Hazardous Waste Rules and Regulations of the State of Tennessee.

TDEC recommends adding the following sentence be added to the end of the first paragraph on hard copy page 33 in Chapter 3 – Section 3.7 "Groundwater and Geology" of the Draft EA. "TVA's landfill for the CUF Dry Ash and Gypsum Disposal Areas have been placed under an Assessment Monitoring Program. The site has continuously exceeded the MCL for Arsenic in three compliance monitoring wells since the fall of 2016. Corrective measures for this facility will be conducted under the ongoing TDEC Commissioner's Order No. OGC 15-0177."

Water Resources

TDEC concurs that a Construction Stormwater Permit with its Stormwater Pollution Prevention Plan will be required since the project will involve the disturbance of more than one acre of land. It is planned to be built in a previously disturbed area. TDEC also anticipates that there will need to be an update to the General National Pollution Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities. The existing NPDES permit # TN0005789 should cover the

[3] Reference TDEC SWM Rule 0400 Chapter 11 for Solid Waste and Chapter 12 for Hazardous Waste http://sos.tn.gov/effective-rules.

new plant if modifications are necessary as it has applicability dates based on any EPA revisions for steam electric power plants and a re-opener clause in the permit.[4]

There is an error in Section 3.6.3.1, that also occurred in the 2017 submittal. The report states that water is used from TVA's intake for showers and eye wash stations, which would make the facility a public water system. Based on previous correspondence between TDEC staff and TVA, this was noted as an error in 2017. TDEC recommends removing eye wash and showers from Section 3.6.3.1 for the Final EA.

TDEC appreciates the opportunity to comment on this Draft EA. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. Please contact me should you have any questions regarding these comments.

Sincerely,

Kendra Abkowitz, PhD
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cc: Daniel Brock, TDEC, DOA
Lacey Hardin, TDEC, APC
Lisa Hughey, TDEC, DSWM
Tom Moss, TDEC, DWR
Stephanie Williams, TDEC, DNA

[4] TDEC notes that this plant should provide improvements to the water quality of the current discharge, which the agency supports.